

## CLAIMS:

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1. A two stage hydrodesulfurizing process for reducing the sulfur content of distillate feedstocks having a sulfur content greater than about 3,000 wppm, which process comprises:

a) reacting said feedstream in a first hydrodesulfurization stage in the presence of a hydrogen-containing treat gas, said first hydrotreating stage containing one or more reaction zones, each reaction zone operated at hydrodesulfurizing conditions and in the presence of a hydrodesulfurization catalyst, thereby resulting in a liquid product stream having a sulfur content less than about 3,000 wppm;

b) passing the liquid product stream of said first hydrodesulfurization stage to a separation zone where a vapor phase product stream and a liquid phase product stream are produced;

c) reacting said liquid phase product stream of b) above in a second hydrodesulfurization stage in the presence of a hydrogen-containing treat gas said second hydrodesulfurization stage containing one or more reaction zones operated at hydrodesulfurization conditions wherein each reaction zone contains a bed of hydrotreating catalyst, thereby resulting in a liquid product stream having less than about 1,000 wppm sulfur;

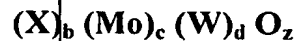
d) passing the liquid product stream of step c) above to a separation zone wherein a vapor phase stream and a liquid phase stream are produced;

e) collecting both said vapor phase stream and said liquid phase stream;  
and

wherein at least one of the reaction zones of at least one of said hydrodesulfurizing stages contains a bulk multimetallic catalyst comprised of at

least one Group VIII non-noble metal and at least two Group VIB metals) and wherein the ratio of Group VIB metal to Group VIII non-noble metal is from about 10:1 to about 1:10.

2. The process of claim 1 wherein the Group VIII non-noble metal is selected from Ni and Co and the Group VIB metals are selected from Mo and W.
3. The process of claim 1 wherein the bulk multimetallic is represented by the formula:



wherein X is a Group VIII non-noble metal, and the molar ratio of b: (c+d) is 0.5/1 to 3/1.

4. The process of claim 3 wherein the molar ratio of b:(c+d) is 0.75/1 to 1.5/1.
5. The process of claim 3 wherein the molar ratio of c:d is preferably  $>0.01/1$ .
6. The process of claim 1 wherein the bulk multimetallic catalyst is essentially an amorphous material having a unique X-ray diffraction pattern showing crystalline peaks at  $d = 2.53$  Angstroms and  $d = 1.70$  Angstroms.
7. The process of claim 1 wherein the bulk multimetallic catalyst also contains an acid function.

~~W. District 61~~